



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/615,295

07/09/2003

Harvey Schneider

87334.5620

7067

7590

10/05/2004

**BAKER & HOSTETLER LLP**

Washington Square

Suite 1100

1050 Connecticut Avenue, N.W.

Washington, DC 20036

EXAMINER

IP, SHIK LUEN PAUL

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/615,295

Applicant(s)

SCHNEIDER ET AL.

Examiner

Paul Ip

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is functional, vague, and indefinite. The claim recites a single element as a processor for performing a plurality of functions without the recitation of additional elements for detecting the set rotational speed, speed detection, torque detection, and kinetic energy determination in order to be able to obtain the data for the processor to make the determination functions.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:  
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
  1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

Art Unit: 2837

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giebeler (4,827,197) in view of Barkus et al (6,679,820 or 6,368,265).

The patent to Giebeler et al discloses a method and an apparatus for over speed protection for high-speed centrifuges. Giebeler et al show in figures 1 and 3 a centrifuge device comprising a rotor 10, a shaft 14, a motor system 16, tachometer (20,150), a current/torque sensor 151, a clock 152, and CPU (18, 154-156). Giebeler et al further show in figures 4 and 5 the compute moment of inertia 256, compute total kinetic energy 258, and lookup table maximum kinetic energy 260 with respect to the graph shown in figure 5. Whereas, the claims further require determining an acceleration rate and a deceleration rate of the rotor to determine the kinetic energy limit of the system. However, the patents to Barkus et al disclose method for energy management and over speed protection of a centrifuge teaching and suggesting in figures 1-13 the speed and kinetic energy determination for controlling the acceleration/deceleration speed control and the kinetic energy limit of the centrifuge motor apparatus. Since Giebeler et al disclose the speed, the torque, and the kinetic energy control of the centrifuge apparatus, and the speed control has to be including the acceleration/deceleration control, it would have been obvious to one of ordinary skill in the art to provide the acceleration/deceleration and kinetic energy control of the centrifuge apparatus as taught or suggested by Barkus et al.

7. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleming et al (5,650,578 or 5,600,076) in view of Watanabe et al (6,204,627).

The patents to Fleming et al disclose energy monitor for a centrifuge instrument. Fleming et al show in figure 1 a centrifuge instrument 10, a rotor 18, a drive shaft 34, a motor 30, a tachometer 42, a torque signal generator 78, a clock 66, an accelerating power signal generator 62, a torque meter 74, and a microprocessor 50. Fleming et al further show in figures 5 and 6 flow diagrams for determining the kinetic energy of the centrifuge instrument. Whereas, the claims require a processor configured to determine an acceleration rate and a deceleration rate of the rotor. However, the patent to Watanabe et al discloses motor control apparatus for centrifuges

Art Unit: 2837

comprising a MPU for determining the acceleration/deceleration speed control of the centrifuges. Since Fleming et al show the accelerating power signal generator 62 for controlling the acceleration speed of the centrifuge instrument, it is known acceleration speed control including controlling the deceleration speed of the motor, it would have been obvious to one of ordinary skill in the art to provide Fleming et al with the acceleration/deceleration speed control of the kinetic energy of the centrifuge instrument as taught or suggested by Watanabe et al.

***Citation of Pertinent References***

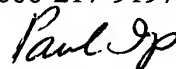
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Iwashita (5,467,001), Carson et al (2004/0033878), Rosselli et al (5,235,864), Carson (6,747,427), Sharples (5,509,881), Schenck et al (5,431,620), Pouvreau (6,205,405), Song (5,800,331), Zick (5,837,879), Fries (4,903,191), and Giebelier et al (4,700,117) disclose centrifuge apparatus comprising a speed sensor, a torque sensor, and a processor for controlling the speed and the kinetic energy of the centrifuge instrument.

***Customer Services Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Ip whose telephone number is (571)-272-1941. The examiner can normally be reached on Monday to Friday from 6:30 a.m. to 3:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin, can be reached on (571)-272-1207. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Ip  
Primary Examiner  
Art Unit 2837